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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,882	09/04/2003	Tse-Yao Huang	HUAN3211/EM	4935
23364	7590	10/18/2005	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			GHYKA, ALEXANDER G	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/653,882	<b>Applicant(s)</b> HUANG ET AL.	
	<b>Examiner</b> Alexander G. Ghyka	<b>Art Unit</b> 2812	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**ALEXANDER GHYKA  
PRIMARY EXAMINER**

*Av 2812*  
*Alex Ghyka*

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

### **DETAILED ACTION**

Applicants' response of August 4, 2005 has been considered and entered. The Applicants' arguments have been considered, but they are not persuasive for the reasons as discussed below.

#### ***Claim Rejections - 35 USC § 103***

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donohoe et al (6,890,863) in view of Tang et al (5,010,032) for the reasons as discussed in the previous Office action.

Claims 4 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donohoe et al (6,890,863) in view of Tang et al (5,010,032), as applied to claims 1-3 above, and further in view of Donohue et al (6,784,111) for the reasons as discussed in the previous Office action.

#### ***Response to Applicants' Arguments***

Applicants' argue that in the '863 patent the formation of the pad oxide and pad nitride are not mentioned. The Examiner maintains that '863 discloses oxide and nitride layers, and the formation of pad oxide and nitride layers is obvious in view of the teaching of Tang et al (5,010,032) which teaches pad oxide layers. See column 11, lines 40-50. As both references pertain to etching, it would be obvious to one of ordinary skill in the art that an etching composition useful in etching oxide and nitride layers would also be useful in etching pad oxide and pad nitride layers.

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Applicants' argue that " more important, the '864 patent discloses a process employing a mixture of two preferred etchant gases: a hydrofluorocarbon and a selectivity compound consisting of carbon and fluorine". The Examiner maintains that hydrofluorocarbons are not excluded by the present claims, and the cited references disclose more than one perfluorocarbon. With respect to the limitation "fluorine to carbon ratio of the second perfluorocarbon being higher than that of said first fluorocarbon", the Examiner maintains that the combination of two perfluorocarbons which are disclosed in the cited references would require one to have a higher ratio than the other.

With respect to the examples of the 032' patent, the Examiner maintains that a reference is not limited to its examples. The Examiner notes that the '111 reference discloses the claimed combinations of perfluorocarbons, and maintains that since these compounds are known as etchants, their combination for that use is *prima facie* obvious to one of ordinary skill in the art.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander G. Ghyka whose telephone number is (571) 272-1669. The examiner can normally be reached on Monday through Thursday during general business hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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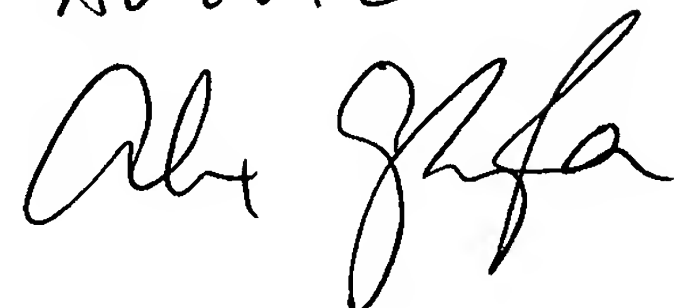
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

\*\*\*

AGG  
October 13, 2005

ALEXANDER GHYKA  
PRIMARY EXAMINER

*Av 2812*

A handwritten signature in cursive script, appearing to read "Alex Ghyska", written in black ink.